B. Amendments to the Claims

Kindly cancel Claims 1-3, and 5-26 without prejudice or disclaimer and add new Claims 28-49 as follows:

1.-26. (Cancelled)

27. (Previously Presented) A deposited-film formation apparatus comprising:

an inside-evacuatable chamber;

a gas feed piping for feeding a material gas into the chamber;

an evacuation means for evacuating the inside of the chamber;

a first evacuation piping which connects the chamber and the evacuation means; and

a second evacuation piping for guiding evacuation through the evacuation means,

wherein the deposited-film formation apparatus has a temperature sensor which detects the heat of reaction that is generated when the material gas fed into the chamber reacts with oxygen contained in air having entered from the outside of the deposited-film formation apparatus and the first evacuation piping or the second evacuation piping gas has a piping connection part, and the temperature sensor is provided 5 cm to 20 cm on the side downstream to the piping connection part.

28. (New) The deposited film formation apparatus according to claim 27, wherein the temperature sensor is provided on an outer wall surface of the chamber or at the first or second evacuation piping.

29. (New) The deposited-film formation apparatus according to claim 27, wherein the temperature sensor is provided on the side downstream to the evacuation means.

30. (New) The deposited-film formation apparatus according to claim 27, which has a leak judgment means which judges the occurrence of a leak on the basis of a measured value of the temperature sensor, and a feed-gas feed control means which stops the feeding of material gases upon detection of a leak by the leak judgment means.

31. (New) The deposited-film formation apparatus according to claim 27, which has the chamber in plurality and a means for moving a beltlike member continuously through the insides of the chambers in their lengthwise direction.

32. (New) A deposited-film formation process comprising the steps of:

evacuating the inside of an inside-evacuatable chamber through an evacuation piping by an evacuation means;

feeding a material gas into the chamber while evacuating the inside of the chamber; and

applying a high-frequency power to form a deposited film on a substrate disposed inside the chamber, wherein,

detecting a leak on the basis of a measured value of a temperature sensor mounted on a downstream side of a piping connection part of the evacuation piping, said sensor detecting the heat of reaction that is generated when the material gas fed into the chamber reacts with oxygen contained in air having entered from the outside, so as to be able to stop the material gas feeding.

33. (New) The deposited-film formation process according to claim 32, wherein the leak is detected on the basis of an increase in a measured value of the temperature sensor.

34. (New) The deposited-film formation process according to claim 32, wherein the temperature sensor is provided on an outer wall surface of the chamber or at the evacuation piping.

35. (New) The deposited-film formation process according to claim 32, wherein the deposited film is formed on the substrate while the substrate is continuously moved in its lengthwise direction.

36. (New) A deposited-film formation apparatus comprising:

a chamber

a gas feed piping for feeding a reactive material gas into the chamber; and

an evacuation means and an evacuation piping by and through which the inside of the chamber is evacuated,

wherein the deposited-film formation apparatus has at least one temperature sensor and a leak judgment means which judges the occurrence of a leak on the basis of a measured value of the temperature sensor and the evacuation piping has a piping connection part and the at least one temperature sensor is provided 5 cm to 20 cm on the side downstream to the piping connection part.

37. (New) The deposited-film formation apparatus according to claim 36, wherein the temperature sensor is provided in plurality, and the leak judgment means judges the leak to have occurred when the measured values of the temperature sensor provided in plurality increase.

38. (New) The deposited-film formation apparatus according to claim 37, wherein the temperature sensors are provided along the flow of gas, and the leak judgment means judges the leak to have occurred when the measured values of the temperature sensors increase along the flow of gas.

39. (New) A vacuum system comprising:

a chamber;

a gas feed means for feeding a gas into the chamber; and

an evacuation means and an evacuation piping by and through which the inside of the chamber is evacuated,

wherein the vacuum system has a temperature sensor capable of measuring temperatures from about 0°C to 150°C which detects the heat of reaction that is generated when the material gas fed into the chamber reacts with oxygen contained in air having

entered from the outside of the deposited-film formation apparatus and the evacuation piping has a piping connection part and the temperature sensor is provided 5 cm to 20 cm on the side downstream to the piping connection part.

40. (New) A leak judgment method comprising the steps of:

feeding a reactive gas to the inside of a vacuum system having a chamber and an evacuation piping;

measuring temperature of the vacuum system at a plurality of spots thereof; and

judging the occurrence of a leak on the basis of a change with time of a plurality of measured values obtained by measuring the temperature.

41. (New) The leak judgment method according to claim 40, wherein the leak is judged to have occurred when the plurality of measured values increase.

42. (New) The leak judgement method according to claim 40, wherein the temperature of the vacuum system is measured at a plurality of spots thereof along the flow of gas in the vacuum system, and the leak is judged to have occurred when the plurality of measured values obtained by measuring the temperature increase along the flow of gas.

43. (New) The leak judgement method according to claim 40, wherein an average value of the temperature of the evacuation piping is found to regard it as a reference value, and the occurrence of a leak of the vacuum system is judged on the basis of a change with time with respect to the reference value, in the plurality of measured values.

44. (New) The leak judgment method according to claim 43, wherein a value greater than the reference value is set as a warning value in advance, and the leak is judged to have occurred when the plurality of measured values become greater than the warning value.

45. (New) A computer-readable recording medium with a recorded program which is able to execute judgment on the occurrence of a leak of a vacuum system having a chamber into which a reactive gas is to be fed and having an evacuation piping, wherein

the recorded program is a program for executing the step of totaling a plurality of measured values obtained by measuring temperature of the vacuum system at a plurality of spots thereof, and the step of judging the occurrence of a leak on the basis of a change with time of the plurality of measured values.

46. (New) The computer-readable recording medium with a recorded program according to claim 45, which judges the leak to have occurred when the plurality of measured values increase.

47. (New) The computer-readable recording medium with a recorded program according to claim 45, which judges the leak to have occurred when the plurality of measured values increase along the flow of gas.

48. (New) The computer-readable recording medium with a recorded program according to claim 45, wherein the recorded program is a program for executing the step of finding an average value of the temperature of the evacuation piping to regard it as a reference value, and the step of judging the occurrence of a leak of the vacuum system on the basis of a change with time with respect to the reference value, in the plurality of measured values.

49. (New) The computer-readable recording medium with a recorded program according to claim 48, wherein the recorded program is a program for executing the step of setting a value greater than the reference value as a warning value in advance, and the step of comparing the plurality of measured values with the warning value to judge the leak to have occurred when the plurality of measured values become greater than the warning value.